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Sequence Listing was accepted.

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Reviewer: Keisha Douglas

Timestamp: [year=2009; month=3; day=27; hr=15; min=54; sec=44; ms=907;]

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Application No: 10727000

Version No: 4.0

Input Set:

Output Set:

Started: 2009-03-04 16:08:24.069

Finished: 2009-03-04 16:08:25.240

Elapsed: 0 hr(s) 0 min(s) 1 sec(s) 171 ms

Total Warnings: 19

Total Errors: 0

No. of SeqIDs Defined: 20

Actual SeqID Count: 20

| Error code | Error Description |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (2) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (3) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (4) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (5) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (6) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (7) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (8) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (9) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (10) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (11) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (12) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (13) |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (15) |
| W 213 | Artificial or Unknown found in <213> in SEQ ID (16) |
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| W 213 | Artificial or Unknown found in <213> in SEQ ID (18) |
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SEQUENCE LISTING

<110> Ribaudó and Shields

<120> B2 Microglobulin Fusion Proteins and High Affinity
Variants

<130> 67022

<140> 10727000

<141> 2003-12-02

<150> 09/719,243

<151> 2001-03-19

<150> PCT/US99/12309

<151> 1999-06-03

<150> 60/088,813

<151> 1998-06-10

<160> 20

<170> PatentIn Ver. 2.0

<210> 1

<211> 119

<212> PRT

<213> Homo sapiens

<400> 1

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Ser | Arg | Ser | Val | Ala | Leu | Ala | Val | Leu | Ala | Leu | Leu | Ser | Leu | Ser |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Leu | Glu | Ala | Ile | Gln | Arg | Thr | Pro | Lys | Ile | Gln | Val | Tyr | Ser | Arg |
| | | | 20 | | | | | 25 | | | | | 30 | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Pro | Ala | Glu | Asn | Gly | Lys | Ser | Asn | Phe | Leu | Asn | Cys | Tyr | Val | Ser |
| | | 35 | | | | | 40 | | | | | 45 | | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Phe | His | Pro | Ser | Asp | Ile | Glu | Val | Asp | Leu | Leu | Lys | Asn | Gly | Glu |
| | 50 | | | | | 55 | | | | | 60 | | | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ile | Glu | Lys | Val | Glu | His | Ser | Asp | Leu | Ser | Phe | Ser | Lys | Asp | Trp |
| 65 | | | | | 70 | | | | | 75 | | | | 80 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Phe | Tyr | Leu | Leu | Tyr | Tyr | Thr | Glu | Phe | Thr | Pro | Thr | Glu | Lys | Asp |
| | | | 85 | | | | | | 90 | | | | | 95 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Tyr | Ala | Cys | Arg | Val | Asn | His | Val | Thr | Leu | Ser | Gln | Pro | Lys | Ile |
| | | | 100 | | | | | 105 | | | | | 110 | | |

| | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|
| Val | Lys | Trp | Asp | Arg | Asp | Met |
| | | | 115 | | | |

<210> 2

<211> 339

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: fusion protein

<400> 2

Met Val Ser Val Glu Thr Gln Ala Tyr Phe Asn Gly Thr Ala Tyr Leu
1 5 10 15

Pro Cys Pro Phe Thr Lys Ala Gln Asn Ile Ser Leu Ser Glu Leu Val
20 25 30

Val Phe Trp Gln Asp Gln Gln Lys Leu Val Leu Tyr Glu His Tyr Leu
35 40 45

Gly Thr Glu Lys Leu Asp Ser Val Asn Ala Lys Tyr Leu Gly Arg Thr
50 55 60

Ser Phe Asp Arg Asn Asn Trp Thr Leu Arg Leu His Asn Val Gln Ile
65 70 75 80

Lys Asp Met Gly Ser Tyr Asp Cys Phe Ile Gln Lys Lys Pro Pro Thr
85 90 95

Gly Ser Ile Ile Leu Gln Gln Thr Leu Thr Glu Leu Ser Val Ile Ala
100 105 110

Asn Phe Ser Glu Pro Glu Ile Lys Leu Ala Gln Asn Val Thr Gly Asn
115 120 125

Ser Gly Ile Asn Leu Thr Cys Thr Ser Lys Gln Gly His Pro Lys Pro
130 135 140

Lys Lys Met Tyr Phe Leu Ile Thr Asn Ser Thr Asn Glu Tyr Gly Asp
145 150 155 160

Asn Met Gln Ile Ser Gln Asp Asn Val Thr Glu Leu Phe Ser Ile Ser
165 170 175

Asn Ser Leu Ser Leu Ser Phe Pro Asp Gly Val Trp His Met Thr Val
180 185 190

Val Cys Val Leu Glu Thr Glu Ser Met Lys Ile Ser Ser Lys Pro Leu
195 200 205

Asn Phe Thr Gln Glu Phe Pro Ser Pro Gln Thr Tyr Trp Ala Ser Thr
210 215 220

Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Ala Ser
225 230 235 240

Ile Gln Arg Thr Pro Lys Ile Gln Val Tyr Ser Arg His Pro Ala Glu
245 250 255

Asn Gly Lys Ser Asn Phe Leu Asn Cys Tyr Val Ser Gly Phe His Pro

| | | |
|---|-----|-----|
| 260 | 265 | 270 |
| Ser Asp Ile Glu Val Asp Leu Leu Lys Asn Gly Glu Arg Ile Glu Lys | | |
| 275 | 280 | 285 |
| Val Glu His Ser Asp Leu Ser Phe Ser Lys Asp Trp Ser Phe Tyr Leu | | |
| 290 | 295 | 300 |
| Leu Tyr Tyr Thr Glu Phe Thr Pro Thr Glu Lys Asp Glu Tyr Ala Cys | | |
| 305 | 310 | 315 |
| Arg Val Asn His Val Thr Leu Ser Gln Pro Lys Ile Val Lys Trp Asp | | |
| 325 | 330 | 335 |
| Arg Asp Met | | |

<210> 3

<211> 358

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: fusion protein

<400> 3

| | | | |
|---|-----|-----|-----|
| Met Ser Arg Ser Val Ala Leu Ala Val Leu Ala Leu Leu Ser Leu Ser | | | |
| 1 | 5 | 10 | 15 |
| Gly Leu Glu Ala Val Ser Val Glu Thr Gln Ala Tyr Phe Asn Gly Thr | | | |
| 20 | 25 | 30 | |
| Ala Tyr Leu Pro Cys Pro Phe Thr Lys Ala Gln Asn Ile Ser Leu Ser | | | |
| 35 | 40 | 45 | |
| Glu Leu Val Val Phe Trp Gln Asp Gln Gln Lys Leu Val Leu Tyr Glu | | | |
| 50 | 55 | 60 | |
| His Tyr Leu Gly Thr Glu Lys Leu Asp Ser Val Asn Ala Lys Tyr Leu | | | |
| 65 | 70 | 75 | 80 |
| Gly Arg Thr Ser Phe Asp Arg Asn Asn Trp Thr Leu Arg Leu His Asn | | | |
| 85 | 90 | 95 | |
| Val Gln Ile Lys Asp Met Gly Ser Tyr Asp Cys Phe Ile Gln Lys Lys | | | |
| 100 | 105 | 110 | |
| Pro Pro Thr Gly Ser Ile Ile Leu Gln Gln Thr Leu Thr Glu Leu Ser | | | |
| 115 | 120 | 125 | |
| Val Ile Ala Asn Phe Ser Glu Pro Glu Ile Lys Leu Ala Gln Asn Val | | | |
| 130 | 135 | 140 | |
| Thr Gly Asn Ser Gly Ile Asn Leu Thr Cys Thr Ser Lys Gln Gly His | | | |
| 145 | 150 | 155 | 160 |

Pro Lys Pro Lys Lys Met Tyr Phe Leu Ile Thr Asn Ser Thr Asn Glu
 165 170 175
 Tyr Gly Asp Asn Met Gln Ile Ser Gln Asp Asn Val Thr Glu Leu Phe
 180 185 190
 Ser Ile Ser Asn Ser Leu Ser Leu Ser Phe Pro Asp Gly Val Trp His
 195 200 205
 Met Thr Val Val Cys Val Leu Glu Thr Glu Ser Met Lys Ile Ser Ser
 210 215 220
 Lys Pro Leu Asn Phe Thr Gln Glu Phe Pro Ser Pro Gln Thr Tyr Trp
 225 230 235 240
 Ala Ser Thr Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly
 245 250 255
 Gly Ala Ser Ile Gln Arg Thr Pro Lys Ile Gln Val Tyr Ser Arg His
 260 265 270
 Pro Ala Glu Asn Gly Lys Ser Asn Phe Leu Asn Cys Tyr Val Ser Gly
 275 280 285
 Phe His Pro Ser Asp Ile Glu Val Asp Leu Leu Lys Asn Gly Glu Arg
 290 295 300
 Ile Glu Lys Val Glu His Ser Asp Leu Ser Phe Ser Lys Asp Trp Ser
 305 310 315 320
 Phe Tyr Leu Leu Tyr Tyr Thr Glu Phe Thr Pro Thr Glu Lys Asp Glu
 325 330 335
 Tyr Ala Cys Arg Val Asn His Val Thr Leu Ser Gln Pro Lys Ile Val
 340 345 350
 Lys Trp Asp Arg Asp Met
 355

<210> 4
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: primer

<400> 4
 ttcttcagca aggactggtc tttc

24

<210> 5
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: primer

<400> 5
attttcagca aggactgggc ttcc 24

<210> 6
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 6
gtgttcagca aggactgggc ttcc 24

<210> 7
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: antisense primer

<400> 7
taagtctgaa tgctccactt ttcc 24

<210> 8
<211> 31
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: primer

<400> 8
agggtaccat ggtttccgtg gagacgcaag c 31

<210> 9
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: reverse primer

<400> 9
tcgaattcat gatgctagcc caatacgttt gaggagatgg 40

<210> 10
<211> 99
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Modified hB2m
S55V

<400> 10

Ile Gln Arg Thr Pro Lys Ile Gln Val Tyr Ser Arg His Pro Ala Glu
1 5 10 15

Asn Gly Lys Ser Asn Phe Leu Asn Cys Tyr Val Ser Gly Phe His Pro
20 25 30

Ser Asp Ile Glu Val Asp Leu Leu Lys Asn Gly Glu Arg Ile Glu Lys
35 40 45

Val Glu His Ser Asp Leu Val Phe Ser Lys Asp Trp Ser Phe Tyr Leu
50 55 60

Leu Tyr Tyr Thr Glu Phe Thr Pro Thr Glu Lys Asp Glu Tyr Ala Cys
65 70 75 80

Arg Val Asn His Val Thr Leu Ser Gln Pro Lys Ile Val Lys Trp Asp
85 90 95

Arg Asp Met

<210> 11

<211> 15

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: linker that
can be used in fusion proteins

<400> 11

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 12

<211> 5

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: linker that
can be used in fusion proteins

<400> 12

Gly Gly Gly Ala Ser
1 5

<210> 13

<211> 21

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: signal peptide

<400> 13

Lys Tyr Leu Leu Pro Thr Ala Ala Ala Gly Leu Leu Leu Leu Ala Ala
1 5 10 15

Gln Pro Ala Met Ala
20

<210> 14

<211> 20

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: signal peptide

<400> 14

Met Arg Ala Lys Leu Leu Gly Ile Val Leu Thr Pro Ile Ala Ile Ser
1 5 10 15

Phe Ala Ser Thr
20

<210> 15

<211> 11

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: c-myc tag

<400> 15

Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Asn
1 5 10

<210> 16

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: ornithine
decarboxylase 309-317

<400> 16

Ser Ser Glu Gln Thr Phe Met Tyr Tyr
1 5

<210> 17

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: HTLV TAX 11-19

<400> 17

Leu Leu Phe Gly Tyr Pro Val Tyr Val
1 5

<210> 18

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: HIV gag 77-85

<400> 18

Ser Leu Tyr Asn Thr Val Ala Thr Leu
1 5

<210> 19

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: pn2a.A3

<400> 19

Lys Leu Tyr Glu Lys Val Tyr Thr Tyr Lys
1 5 10

<210> 20

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: influenza NP
265-273

<400> 20

Ile Leu Arg Gly Ser Val Ala His Lys
1 5